

## Associate in Pre-Engineering - Civil and Mechanical Engineering Emphasis, A.P.E.

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### Requirements

The pre-engineering program at UVU has been created for students who plan to complete the first two to three years of their engineering education at the ABET accredited UVU, then either continue at UVU or transfer to a baccalaureate university to complete their engineering degree. With adequate planning, pre-engineering coursework completed at UVU will be sufficient for students to remain at UVU or to transfer to all of the Utah universities with baccalaureate engineering degrees. All students who declare pre-engineering as their major are automatically accepted into pre-engineering status. After completion of the pre-engineering program at UVU, the student applies for professional status at UVU or at an institution of the student's choice.

### Total Program Credits: 69

General Education Requirements:		28 Credits
	<a href="#">ENGL 1010</a> Introduction to Academic Writing CC	3
or	<a href="#">ENGL 1005</a> Literacies and Composition Across Contexts CC (5)	
	<a href="#">ENGL 2010</a> Intermediate Academic Writing CC	3
Complete the following Natural and Physical Science courses:		
	Biology	3
	<a href="#">CHEM 1210</a> Principles of Chemistry I PP	4
	<a href="#">CHEM 1215</a> Principles of Chemistry I Laboratory	1
	<a href="#">PHYS 2210</a> Physics for Scientists and Engineers I PP	4
	<a href="#">PHYS 2215</a> Physics for Scientists and Engineers I Lab	1
Complete any combination of the following with no more than 1 course each from Humanities, Fine Arts, and Social/Behavioral Science:		
	Humanities (from list)	
	Fine Arts (from list)	
	Social/Behavioral Sciences (from list)	
Complete any American Institutions course:		3
	<a href="#">POLS 1000</a> American Heritage SS (3)	
	<a href="#">HIST 2700</a> US History to 1877 AS (3)	
and	<a href="#">HIST 2710</a> US History since 1877 AS (3)	
	<a href="#">HIST 1700</a> American Civilization AS (3)	
	<a href="#">HIST 1740</a> US Economic History AS (3)	
	<a href="#">POLS 1100</a> American National Government AS (3)	
Discipline Core Requirements:		16 Credits
	<a href="#">MATH 1210</a> Calculus I QL	4
	<a href="#">MATH 1220</a> Calculus II	4
	<a href="#">ENGR 1030</a> Engineering Programming	3
or	<a href="#">CS 1400</a> Fundamentals of Programming (3)	
	<a href="#">PHYS 2220</a> Physics for Scientists and Engineers II PP	4

	<a href="#">PHYS 2225</a> Physics for Scientists and Engineers II Lab	1
Emphasis Requirements:		9 Credits
	<a href="#">ENGR 2010</a> Engineering Statics	3
	<a href="#">ENGR 2030</a> Engineering Dynamics	3
	<a href="#">ENGR 2140</a> Mechanics of Materials	3
or	<a href="#">ENGR 2160</a> Introduction to Materials Science and Engineering (3)	
or	<a href="#">ENGR 2450</a> Computational Methods for Engineering Analysis (3)	
Emphasis Elective Requirements:		16 Credits
Students should carefully select electives from the following list, based on the engineering discipline (Civil or Mechanical) they are interested in and the college or university they want to attend to finish their BS degree. See your advisor.		16
	<a href="#">ECE 1000</a> Introduction to Electrical and Computer Engineering (3)	
	<a href="#">ECE 2210</a> Fundamentals of Electric Circuit Analysis (3)	
	<a href="#">EGDT 1040</a> Fundamentals of Technical Engineering Drawing (3)	
	<a href="#">EGDT 1071</a> 3 Dimensional Modeling--Solidworks (3)	
	<a href="#">EGDT 1400</a> Surveying Applications and Field Techniques I (3)	
	<a href="#">ENGR 1000</a> Introduction to Engineering WE (3)	
	<a href="#">ENGR 1020</a> Survey of Engineering (1)	
	<a href="#">ENGR 2140</a> Mechanics of Materials (3)	
	<a href="#">ENGR 2160</a> Introduction to Materials Science and Engineering (3)	
	<a href="#">ENGR 2300</a> Engineering Thermodynamics (3)	
	<a href="#">ENGR 2450</a> Computational Methods for Engineering Analysis (3)	
	<a href="#">MATH 2210</a> Calculus III (4)	
	<a href="#">MATH 2250</a> Differential Equations and Linear Algebra (4)	
or	<a href="#">MATH 2270</a> Linear Algebra (3)	
and	<a href="#">MATH 2280</a> Ordinary Differential Equations (3)	

### Graduation Requirements:

1. Completion of a minimum of 69 semester credits.
2. Overall grade point average of 2.0 (C) or above. 2.5 or above in Math, Science, and Engineering
3. Residency hours -- minimum of 20 credit hours through course attendance at UVU.
4. Completion of GE and specified departmental requirements.

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### Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in [Wolverine Track](#).

Semester 1	Course Title	Credit Hours
ENGR 1030	Engineering Programming	3
American Institutions course		3
Social/Behavioral Science		3
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC or Literacies and Composition Across Context CC	3
Humanities		3
Semester total:		15
Semester 2	Course Title	Credit Hours
MATH 1210	Calculus I QL	4
CHEM 1210	Principles of Chemistry I PP	4
CHEM 1215	Principles of Chemistry I Laboratory	1
ENGL 2010	Intermediate Academic Writing CC	3
Biology		3
Semester total:		15
Semester 3	Course Title	Credit Hours
MATH 1220	Calculus II	4
PHYS 2210	Physics for Scientist and Engineers I PP	4
PHYS 2215	Physics for Scientist and Engineers I Lab	1
ENGR 2010	Engineering Statics	3
Semester total:		12
Semester 4	Course Title	Credit Hours
PHYS 2220	Physics for Scientists and Engineers II PP	4
PHYS 2225	Physics for Scientists and Engineers II Lab	1
ENGR 2140	Mechanics of Materials	3
ENGR 2030	Engineering Dynamics	3
Elective		3
Semester total:		14
Semester 5	Course Title	Credit Hours
Elective		4
Elective		3
Elective		3
Elective		3
Semester total:		13
Degree total:		69